

# LTC 8500 Series Allegiant Matrix/Control Systems - Modular

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- ▶ 64 Camera by 8 monitor switching
- ▶ 8 Independent keyboards
- ▶ Modular construction
- ▶ Powerful alarm handling capabilities
- ▶ SalvoSwitching and SatelliteSwitch capability

The LTC 8500 Series Allegiant Video Switcher/Control Systems combine both switching and computer technology to provide powerful performance and unique system features for the security user. Offering full matrix switching capability, these systems can be programmed to display the video from any camera on any monitor, either manually or via independent automatic switching sequences.

The LTC 8500 Series provide versatile modular construction accommodating up to 64 camera inputs, 8 monitor outputs, 8 keyboards, 128 alarm points, a computer interface port, and a logging printer port.

## Functions

### Sequencing Capabilities

These systems can be programmed with up to 60 sequences which can be run independently of each other in either a forward or reverse direction. Any of the sequences can utilize the Salvo Switching capability where any number of system monitors may be selected to switch as a group. Using the optional LTC 8559/00 Master Control Software package or

LTC 8850/00 GUI Allegiant Server, sequences can be made to activate and deactivate automatically based upon the time of day and the day of week.

### Camera Control

On-site receiver/drivers permit operator control of pan, tilt, zoom, multiple pre-positions, four auxiliaries, auto-pan, and random scan. An integral local test function is also a standard feature. The LTC 8500 Series also supports variable speed operation and full programming functions of AutoDome series dome cameras.

### Bilinx® Capability

When combined with an LTC 8016 Allegiant Bilinx Data Interface unit, these switchers/controllers support operations using Bilinx communication. With Bilinx, PTZ control is accomplished using a bi-directional communication protocol embedded in the video signal of Bosch Dinion and AutoDome® CCTV cameras. In addition, Bilinx uses the standard video cable to transmit alarm and status messages from the cameras, providing superior performance without the need for separate data transmission cables.

### Macro Capabilities

The LTC 8500 system provides powerful macro capabilities. The macros can be activated using Allegiant system keyboards, system time event functions, alarm activations, and via special function icons in the LTC 8850/00 GUI software.

### Alarm Capabilities

With the addition of the LTC 8540/00 Series alarm interface accessory unit, an external contact closure or logic level can be used to automatically activate any camera to be displayed. Any monitor or group of monitors can be set to display cameras under alarm conditions. The base system contains three built-in alarm response modes: basic, auto-build, and sequence and display. In addition to these three modes, the PC based software packages now includes the ability to combine any or all three standard modes within the same system. Alarm video may be selected to reset either manually or automatically. In addition, a 16-character alarm title can be selected to appear instead of the camera title during alarm conditions.

### System Operation

System operation and programming is accomplished using a full-function, ergonomically designed keyboard. Up to 8 keyboards may be used in the system. Built-in operator priority levels and the ability to restrict certain operators from controlling designated functions provide maximum flexibility.

### Programming/Software Capabilities

The LTC 8500 Series includes a 48-character on-screen display for time-date, camera number, camera ID (16 characters), an icon to identify controllable cameras, and monitor (12 characters) or status information. Over 250 characters are available when programming camera ID and monitor titles.

Utilizing a Windows-based PC and the LTC 8059/00 Master Control Software package or LTC 8850/00 Graphical User Interface (GUI) software, enhanced programming and switching features can be obtained. A user-friendly spreadsheet format provides the ability to enter camera titles, operator names, 64 timed events, change system parameters, program camera sequences, install lockouts, and access the advanced alarm handling screens with speed and efficiency. The program information may then be transferred into the Allegiant system, stored on disk, or printed out directly from a printer connected to the PC.

The LTC 8850/00 Bosch GUI software is designed around an intuitive graphic-based interface; the GUI provides high performance programming, control and monitoring of all system functions by using on-screen icons to reflect real time status of the devices controlled by the system.

The LTC 8850/00 GUI software also provides the ability to monitor system status events. System alarms, switching functions, sequence events,

keyboard actions, and video loss information can be viewed in real time on the PC screen and, if desired, logged to the PC hard drive.

The LTC 8500 Series contains a logging printer output port which accepts a standard RS-232 serial printer. This provides a permanent record of system status showing time and date of changes, such as: incoming alarms, acknowledgment of alarms, loading of sequences, user log-on to keyboard, transfer of system tables and sequences, and a power up reset message. In addition, the printer can be used to obtain a hard copy of the system's configuration tables and sequences.

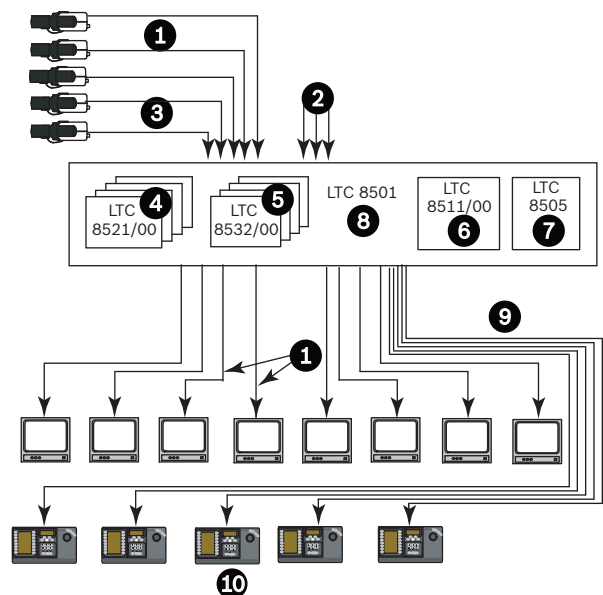
### Expansion Capabilities

The LTC 8500 Series can serve as the Master switcher in a SatelliteSwitch configuration. This innovative SatelliteSwitch feature enables a single LTC 8500 Series system to communicate with up to 64 remotely located "Satellite" systems. Any Allegiant system model can serve as a remote Satellite switcher. This powerful feature permits the design of a distributed type system. The main control site can view/control local cameras plus cameras located at any of the remotely distributed Satellite sites. The Satellite sites can view/control only cameras associated with their own site. When used in this type of configuration, the main LTC 8500 Series system can access up to 256 cameras located anywhere in the system.

### Certifications and approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

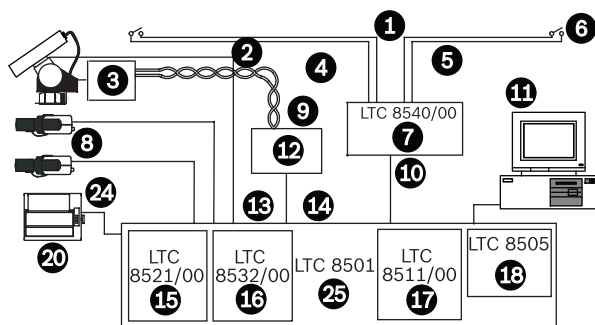
### Installation/configuration notes



LTC 8500 Series Configuration Diagram

### (64 Cameras by 8 Monitors)

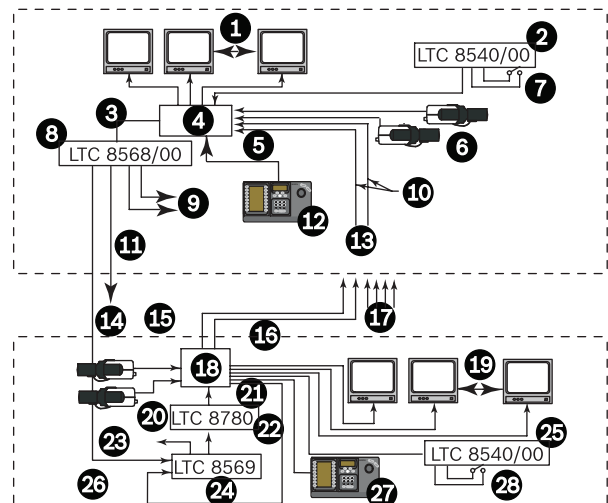
- 1 Video Coax
- 2 Up to 64 Maximum Video Inputs
- 3 Additional System Cameras
- 4 8 x 8 Channel Input Cards
- 5 4 x 2 Channel Output Cards
- 6 CPU Module
- 7 Power Supply Module
- 8 Main CPU Bay
- 9 3 m (10 ft) Interconnect Cable Supplied with Keyboard
- 1 Maximum of 8 Full Function Keyboards up to 1.5 km (5000 ft) away using Optional Remote Hook-up Kit
- 0 away using Optional Remote Hook-up Kit



LTC 8500 Series Full Capacity Configuration Diagram

- 1 64 Separate Alarm Inputs
- 2 Video Coax
- 3 Up to 64 On-Site LTC 8561 Receiver/Driver Units
- 4 Up to 1.5 km (5000 ft) using 18 AWG shielded twisted pair cable (Belden 8760 or equiv.)
- 5 Twisted Pair, Typical
- 6 Contact closure or active low logic level
- 7 Alarm Interface Unit
- 8 Additional System Cameras
- 9 32 Separate Outputs
- 10 2 m (6 ft) Interconnect Cable Supplied with LTC 8540/00 Series, providing Data and Power Connections
- 11 Optional LTC 8059/00 Software Package can be run on a Windows based PC
- 12 Signal Distribution Unit
- 13 Up to 64 Video Inputs Maximum
- 14 2 m (6 ft) Interconnect Cable Supplied with LTC 8568/00 Series, providing Data and Power Connections
- 15 8 x 8 Channel Input Cards
- 16 4 x 2 Channel Output Cards
- 17 CPU Module

- 18 Power Supply Module
- 19 3 m (10 ft) Interface Cable Provided with Optional LTC 8059/00 Software Package
- 20 Serial Logging Printer Capability
- 21 8 Monitor Output Capability
- 22 3 m (10 ft) Interconnect Cable Supplied with Keyboard
- 23 Maximum of 8 Full Function Keyboards Up to 1.5 km (5000 ft) away using Optional Remote Hook-up Kit
- 24 RS-232 Data
- 25 Main CPU Bay



Satellite System Using LTC 5112- or LTC 5124-Series Switchers

- 1 Monitor Outputs
- 2 Alarm Interface Unit
- 3 Pan/Tilt/Zoom and Satellite Control Data
- 4 Allegiant Main CPU Bay
- 5 Inputs Used for Both Local and Trunk Lines
- 6 Local Camera Video Inputs
- 7 Alarm Inputs May Activate Either Local or Satellite Video on Main Control Center's Monitor
- 8 Signal Distribution Unit
- 9 To Any Local PTZ Camera Sites
- 1 Multiple Video Coax
- 0 Up to 1.5 km (5000 ft) Using 1 sq mm (18 AWG) Shielded Twisted Pair (Belden 8760 or Equivalent)
- 1 Allegiant Keyboard controls any local or remote camera on any local monitor (Video and PTZ)
- 2 Multiple Video Trunk Lines From Each Remote Satellite Location
- 3

- 1 One Line to Each Remote Satellite System Location
- 4
- 1 Pan/Tilt/Zoom and Satellite Control Data
- 5
- 1 Monitor Outputs Used As Video Trunk Lines to Main Control Site
- 6
- 1 Video Trunk Lines From Other Satellite Locations
- 7
- 1 Any Model Allegiant Main Bay
- 8
- 1 Local Monitors
- 9
- 2 Satellite Data Line
- 0
- 2 Console Port Input
- 1
- 2 Data Converter Units
- 2
- 2 To Any Local PTZ Camera Sites
- 3
- 2 Code Merger Unit
- 4
- 2 Alarm Interface Unit
- 5
- 2 Local PTZ Control Data Line
- 6
- 2 Allegiant Keyboard controls any local or remote camera on any
- 7 local monitor (Video and PTZ)
- 2 Alarm Inputs Activate Only Local Video on Local Monitors
- 8

## Technical specifications

### Capacities

Video Inputs	Standard: 64 Satellite configuration: 256
Video Outputs	8
Keyboards	8
Alarm Inputs	128
Receiver Drivers	Standard: 64 Satellite configuration: 256

### Electrical

Video Bandwidth (-3 dB)	8 MHz typical
Differential Gain	3% maximum
Differential Phase	3° maximum
K Factor	0.5%
Signal-to-Noise-Ratio	60 dB minimum
Crosstalk (Input Isolation)	70 dB Typical at 3.58 MHz

Feed through (Input to Output Isolation)	50 dB Typical at 3.58 MHz
Gain	Unity (into 75 Ohm termination)
Tilt	1% Typical

### Environmental

Temperature	
Operating	0°C to 50°C (32°F to 122°F)
Storage	-40°C to 60°C (-40°F to 140°F)
Altitude	3000 m (10,000 ft)
Humidity	0 to 95% relative, non-condensing
Vibration	3 g swept sine wave, 15 Hz to 2000 Hz
Shock	50 g, 11 m/s, 1/2 sine wave

### LTC 8501 Series Equipment Bay

Includes LTC 8501/00 equipment rack, LTC 8511/00 microprocessor module, and LTC 8505 Series power supply.

Power Model No.	Rated Voltage	Voltage Range	Nominal Power <sup>1</sup>
LTC 8501/60	120 VAC, 50/60 Hz	100 to 140	192 W
LTC 8501/50	220-240 VAC, 50/60 Hz	198 to 264	192 W

1. Power at rated voltage fully loaded.

### Connectors

Video Inputs	1 to 64, 1 Sync input, and 8 monitor inputs
Outputs	BNC

### External Accessory Interfaces

9-pin D-type Connectors	
Console	RS-232 port for external PC or control interface (default = 1200 baud)
Alarm	RS-232 port for Allegiant alarm accessory units (default = 1200 baud)
Printer	RS-232 port for system logging printer (default = 1200 baud)
SDA	TTL level, high-speed control data output (Bi-Phase) for interface to Allegiant series signal distribution units (data clock rate = 31.25 kHz)
Keyboards	Eight 6-pin RS-485 ports for Allegiant keyboard use (default = 9600 baud)

**Equipment Rack**

Size (W x D x H)	EIA 48 cm (19 in.) rack 483 x 356 x 178 mm (19 x 14 x 7 in.)
Weight	8.2 kg (18.2 lb)
<b>Construction/Finish</b>	
Top and Bottom	Steel
Front, Sides, and Back	Aluminum
Finish	Charcoal

**Microprocessor Module (LTC 8511/00)**

Size (D x H)	290 x 160 mm (11.5 x 6.25 in.)
Weight	0.34 kg (0.8 lb)

**Power Supply**

(LTC 8505/60–120 VAC, LTC 8505/50–220-240 VAC)

Size (W x D x H)	90 x 335 x 160 mm (3.46 x 13.2 x 6.25 in.)
Weight	4 kg (9 lb)
Indicators	One power On/Off, seven fuse alert, and one external sync LED

**LTC 8521/00 Camera Input Module**

Use up to eight (8) per equipment bay.

Camera Inputs	8
Size (D x H)	290 x 160 mm (11.5 x 6.25 in.)
Weight	0.23 kg (0.5 lb)

**LTC 8532/00 Monitor Output Module**

Use up to four (4) per equipment bay.

Monitor Outputs	2
Size (D x H)	290 x 160 mm (11.5 x 6.25 in.)
Weight	0.27 kg (0.6 lb)

**Allegiant Accessories**

The LTC 8500 Series accessory products provide many optional features to the base Allegiant switching systems. Accessory products include keyboards, keyboard extension kits, receiver/driver units, switcher/followers, and code merger units. All accessory products are designed to be installer-friendly and compatible throughout the Allegiant series systems. Refer to the Allegiant Accessories datasheet for complete details.

**Ordering information****LTC 8501/50 Allegiant Matrix Switcher**

up to 64 camera inputs, 8 monitor outputs, incl. single bay, CPU and power supply, 230 VAC, 50 Hz  
Order number **LTC 8501/50**

**LTC 8501/60 Allegiant Matrix Switcher**

up to 64 camera inputs, 8 monitor outputs, incl. single bay, CPU and power supply, 120 VAC, 60 Hz  
Order number **LTC850160**

**LTC 8521/00 Camera Input Module**

for LTC 8500, 8 camera inputs per card  
Order number **LTC 8521/00**

**LTC 8532/00 Monitor Output Module**

for LTC 8500, 2 monitor outputs per card  
Order number **LTC 8532/00**

**Accessories****LTC 8511/00 Spare CPU Module**

for LTC 8501 bay  
Order number **LTC 8511/00**

**LTC 8505/50 Spare Power Supply**

for LTC 8501/50 bay, 230 VAC, 50 Hz  
Order number **LTC 8505/50**

**LTC 8505/60 Spare Power Supply**

for LTC 8501/60 bay, 115 V, 60 Hz  
Order number **LTC 8501/60**

**Software Options****SFT-VASA Hybrid IP - Analog/Matrix Video over IP Integration Software**Order number **SFT-VASA****LTC 8850/00 GUI Allegiant Single User Software Package**Order number **LTC 8850/00****LTC 8059/00 Allegiant Master Control Software**Order number **LTC 8059/00****SFT-INTSRV Integration Server Software**

Allegiant integration software package  
Order number **SFT-INTSRV**

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